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Charles Darwin University

Final Examination

Family Name					
Given Name/s					
Student Number					
Teaching Period	Semester 1, 2019				

ACT202 – Management Accounting	DURATION	
	Reading Time:	10 minutes
	Writing Time:	180 minutes
INSTRUCTIONS TO CANDIDATES		
<p>1.1 The examination has two sections</p> <p>Section A: Suggested Time: Approx. 140 Minutes writing Short Answer and Essay Questions: This section consists of ten questions (some with multiple parts each), all of which must be answered Note that questions ARE NOT of equal value. Total marks for this section 40</p> <p>Section B: Suggested Time: Approx. 40 Minutes writing Multiple Choice Questions: Answer ALL 20 questions Note that questions are of equal value. Total marks for this section 10 Total marks for this exam 50</p>		
EXAM CONDITIONS		
<p><u>You may begin writing from the commencement of the examination session.</u> The reading time indicated above is provided as a guide only.</p>		
This is a RESTRICTED OPEN BOOK examination		
Any non-programmable calculator is permitted		
No handwritten notes are permitted		
Hard copy, unannotated English translation dictionary only		
ADDITIONAL AUTHORISED MATERIALS	EXAMINATION MATERIALS TO BE SUPPLIED	
No additional printed material is permitted	1 x 8 Page Book 1 x 4-Multiple Choice Answer Sheet 1 x Scrap Paper	

THIS EXAMINATION IS PRINTED
DOUBLE-SIDED.

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LEFT BLANK.

SECTION A: (40 Marks - Suggested time approx. 140 minutes)

This section consists of ten questions that must be answered.

Commence the answer to the question on a new page of the exam booklet.

Additional exam booklets are available if needed.

Clearly mark the question number on the top of the page. If you use more than one page to answer a question, clearly indicate, at the top of the page, the number of pages used i.e. [1 of 3], [2 of 3], [3 of 3] etc.

QUESTION 1 (8 Marks - Suggested time approx. 28 minutes)

Surfcurl Ltd produces a line of non-motorised boats. Surfcurl uses a normal-costing system and allocates production overhead using direct production labour cost. The following data are for 2019:

Budgeted production overhead cost	\$125,000
Budgeted direct production labour cost	\$250,000
Actual production overhead cost	\$117,000
Actual direct production labour cost	\$228,000

Inventory balances on 31 December 2019 were as follows:

Account	Ending balance	2018 direct production labour cost in ending balance
Work in process	\$50,700	\$20,520
Finished goods	245,050	59,280
Cost of goods sold	549,250	148,200

Required

- a) Calculate the production overhead allocation rate.
(1 marks – suggested time approx. 3 minutes)
- b) Calculate the amount of under- or over-allocated production overhead.
(1 marks – suggested time approx. 4 minutes)
- c) Calculate the ending balances in Work In Process, Finished Goods and Cost Of Goods Sold if under- or over-allocated production overhead is as follows:
 - i. Written off to Cost of Goods Sold.
(1 mark – suggested time approx. 4 minutes)
 - ii. Prorated based on ending balances (before proration) in each of the three accounts.
(2 marks – suggested time approx. 7 minutes)
 - iii. Prorated based on the overhead allocated in 2019 in the ending balances (before proration) in each of the three accounts.
(2 marks – suggested time approx. 7 minutes)
 - iv. Which method would you choose? Justify your answer. .
(1 mark – suggested time approx. 3 minutes)

QUESTION 2 (4 Marks - Suggested time approx. 15 minutes)

Pottle Ice Cream uses a mixing department and a freezing department to produce its ice cream. Its process costing system in the mixing department has two direct materials cost categories (ice cream mix and flavourings) and one conversion cost pool.

The following data pertain to the mixing department for April 2018:

Work in process, 1 April	0
Started in April	10,000, litres
Completed and transferred to freezing	8,500, litres
Costs:	
Ice cream mix	\$27,000
Flavourings	\$4,080
Conversion costs	\$53,700

The ice cream mix is introduced at the start of operations in the mixing department, and the flavourings are added when the product is 40% completed in the mixing department. Conversion costs are added evenly during the process. The ending work in process in the mixing department is 30% complete.

Required

Calculate the equivalent units in the mixing department for April 2018 for each cost category.

(4 marks – suggested time approx. 15 minutes)

QUESTION 3 (4 Marks - Suggested time approx. 15 minutes)

The assembly division of Quality Time Pieces Ltd uses the FIFO method of process costing. The following data relate to the month of May 2018:

	Physical units (outputs)	Direct materials	Conversion costs
Beginning work in process (May 1) ^a	100	\$459,888	\$142,570
Started in May 2018	510		
Completed during May 2018	450		
Ending work in process (May 31) ^b	160		
Total costs added during May 2018		\$3,237,000	\$1,916,000

^a Degree of completion: direct materials, 80%; conversion costs, 35%.

^b Degree of completion: direct materials, 80%; conversion costs, 40%.

The flow of Production report for May 2018 is as follows:

	Physical Units	Direct materials	Conversion costs
Flow of Production			
Work in process, beginning	100		
Started during current period	<u>510</u>		
To account for	<u>610</u>		
Completed and transferred out from beginning WIP 100 units:	100	20	65
Started and completed	350	350	350
Work in process, ending	<u>160</u>	<u>128</u>	<u>64</u>
Accounted for	610		
Work done to date		498	479

Required

Use the FIFO method to summarise the total costs to account for, calculate the cost per equivalent unit for direct materials and conversion costs, and assign costs to units completed (and transferred out) and to units in ending work in process.

(4 marks – suggested time approx. 15 minutes)

QUESTION 4 (4 Marks - Suggested time approx. 15 minutes)

Solar Limited wants to find an equation to estimate some of their monthly operating costs for the coming year. The following cost and other data were gathered for the previous 12 months:

Month	Maintenance costs	Machine-hours	Health insurance	Number of employees	Shipping costs	Units shipped
January	\$4,500	165	\$8,600	68	\$25,776	7,160
February	\$4,452	120	\$8,600	75	\$29,664	8,240
March	\$4,600	230	\$8,600	92	\$28,674	7,965
April	\$4,850	318	\$8,600	105	\$23,058	6,405
May	\$5,166	460	\$8,600	89	\$21,294	5,915
June	\$4,760	280	\$8,600	87	\$33,282	9,245
July	\$4,910	340	\$8,600	93	\$31,428	8,730
August	\$4,960	360	\$8,600	88	\$30,294	8,415
September	\$5,070	420	\$8,600	95	\$25,110	6,975
October	\$5,250	495	\$8,600	102	\$25,866	7,185
November	\$5,271	510	\$8,600	97	\$20,124	5,590
December	\$4,760	275	\$8,600	94	\$34,596	9,610

Required

- Which of the above costs is variable? Fixed? Mixed? Explain.
(1 marks– suggested time approx. 4 minutes)
- Using the high–low method, determine the cost function for each cost.
(2 marks – suggested time approx. 7 minutes)
- Next month, Solar Limited expects to use 400 machine-hours, have 80 employees and ship 9000 units. Estimate total operating cost for the month.
(1 mark – suggested time approx. 4 minutes)

QUESTION 5 (4 Marks - Suggested time approx. 15 minutes)

Timeless Cosmetics manufactures and sells a face cream to health and beauty stores in the greater Sydney area. It presents the monthly profit statement shown here to George Chang, a potential investor in the business. Help Mr Chang understand Timeless's cost structure.

Timeless Cosmetics		
Operating Income Statement		June 2019
Units sold		<u>20,000.</u>
Revenues		\$200,000
Cost of goods sold		,
Variable manufacturing costs	\$110,000,	,
Fixed manufacturing costs	,40,000,	,
Total cost of goods sold		<u>150,000.</u>
Gross margin		50,000,
Operating costs		,
Variable marketing costs	,\$10,000,	,
Fixed marketing & administration costs	,20,000,	,
Total operating costs		<u>30,000.</u>
Operating profit	,	<u>\$20,000.</u>

Required

- Calculate the firm's contribution margin.
(1 mark – suggested time approx. 4 minutes)
- Calculate the contribution margin percentage and break-even point in units and revenues for June 2019.
(2 marks – suggested time approx. 7 minutes)
- What is the margin of safety (in units) for June 2019? How is this relevant to any potential investor?
(1 mark – suggested time approx. 4 minutes)

QUESTION 6 (3 Marks - Suggested time approx. 12 minutes)

Mildura Company produces wine caskets and has determined the following direct cost categories and budgeted amounts:

	Standard Inputs	Standard Cost
Category	for 1 output	per input
Direct Materials	1.00	\$7.50
Direct Labour	0.30	9.00
Direct Marketing	0.50	3.00

Actual performance for the company is shown below:

Actual output: (in units)	4,000
Direct Materials:	
Materials costs	\$30,225
Input purchased and used	3,900
Actual price per input	\$7.75
Direct Manufacturing labour:	
Labour costs	\$11,470
Labour-hours of input	1,240
Actual price per hour	\$9.25
Direct Marketing labour:	
Labour costs	\$5,880
Labour-hours of input	2,100
Actual price per hour	\$2.80

Required:

- What is the combined total of the flexible-budget variances?
(1½marks – suggested time approx. 6 minutes)
- What is the price variance of the direct materials?
(¼ mark – suggested time approx. 1 minutes)
- What is the price variance of the direct manufacturing labour and the direct marketing labour, respectively?
(½ mark – suggested time approx. 2 minutes)
- What is the efficiency variance for direct materials?
(¼ mark – suggested time approx. 1 minutes)
- What are the efficiency variances for direct manufacturing labour and direct marketing labour, respectively?
(½ mark – suggested time approx. 2 minutes)

QUESTION 7 (5 Marks - Suggested time approx. 18 minutes)

Gosford Company had the following journal entries recorded for the end of June. Unfortunately, the company's only accountant quit on 10 July and the CEO is at a loss as to the company's performance for the month of June.

Materials Control	150,000	
Direct Materials Price Variance		5,000
Accounts Payable Control		145,000
Work-in-Process Control	60,000	
Direct Materials Efficiency Variance	4,000	
Materials Control		64,000
Work-in-Process Control	425,000	
Direct Manufacturing Labour Price Variance	7,500	
Direct Manufacturing Labour Efficiency Variance		9,000
Wages Payable Control		423,500

Required:

- What kind of performance did the company have for June?
(2 marks – suggested time approx. 7 minutes)
- Explain each variance.
(2 marks – suggested time approx. 7 minutes)
- Speculate on possible interrelationships between the six variances (or combinations of the six variances) computed in part (a).
(1 marks – suggested time approx. 4 minutes)

(Do not waste time and marks explaining the calculation of the variances.)

QUESTION 8 (2 Marks - Suggested time approx. 6 minutes)

- Can the variable overhead efficiency variance be interpreted the same way as the efficiency variance for direct-cost items? Explain.
(1 mark – suggested time approx. 3 minutes)
- Explain the meaning of a favourable production-volume variance.
(1 mark – suggested time approx. 3 minutes)

(Do not waste time and marks explaining the calculation of the variances.)

QUESTION 9 (2 Marks - Suggested time approx. 6 minutes)

In the context of determining overhead allocations, define the following terms and provide an example of each to illustrate your definition.

- (i) Normal activity
- (ii) Practical activity
- (iii) Theoretical activity

QUESTION 10 (4 Marks - Suggested time approx. 15 minutes)

Bigfirm has two support departments: the Human Resources Department and the Computing Department. Bigfirm also has two departments that service clients directly: the Taxation division and the Audit division. The usage of the two support departments' output (in hours) for the year just ended was as follows:

<i>User of service</i>	Provider of Service	
	<i>Human Resources</i>	<i>Computing</i>
Human Resources		240,000
Computing	4,000	
Taxation Div.	4,000	720,000
Audit Div.	4,000	240,000
	12,000	1,200,000

The Budgeted costs in the two support departments for the year just ended were:

Human Resources	\$180,000
Computing	\$300,000

Calculations to three decimal places

Required:

- a) Use the direct method of cost allocation to allocate the budgeted costs of the Human Resources and Computing Departments to the Taxation and Audit Divisions.
(1 marks – suggested time approx. 4 minutes)
- b) Use the step down method to allocate the budgeted costs of the Human Resources and Computing Departments to the Taxation and Audit Divisions. Bigfirm allocates the costs of the Computing Department first. .
(1 marks – suggested time approx. 4 minutes)
- c) Use the reciprocal services method to allocate the budgeted costs of the Human Resources and Computing Departments to the Taxation and Audit Divisions.
(2 marks – suggested time approx. 7 minutes)

SECTION B**(10 Marks - Suggested time approx. 40 minutes)****QUESTIONS 1 TO 20****Questions are of equal value – ½ mark each****(Average of approx. 2 minutes per question - some questions will take longer to complete than others)**

This section is made up of 20 multiple choice questions. The answers to the multiple choice questions must be made on the multiple choice answer sheet provided with this examination paper. Answers should be clearly marked in pen on the answer sheet provided by filling in the box below the appropriate letter. e.g.

A	B	C	D
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If a choice for a particular question is subsequently discarded and a new answer chosen, cross out the original answer and remark with the new answer as below. e.g.

A	B	C	D
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The exam paper provided must be submitted at the end of this examination for marking.

Clearly write your name and student number on the exam paper provided.

Use only BLACK or DARK BLUE INK. DO NOT write in pencil.

All loose answer sheets are to be placed inside the exam booklet. Additional answer sheets will be provided where necessary.

Note that questions are of equal value.